REMARKS

The Applicants appreciate the careful examination the Examiner has given to this application and believe the claims as amended will satisfy the Examiner's concerns.

Claims 1 and 9 have been amended to introduce additional limitations in order to formulate the invention more clearly and to differentiates from the cited prior art of Srivastava and Israel.

Namely, claims 1 and 9 as amended provide: dividing of an optical spectrum into at least two substantially non-overlapping spectral bands, which are respectively below and above a separation wavelength and have some non-substantial overlapping in the region of the separation wavelength, and using optical seam filters at the nodes of the network, which, in addition to providing at least one optical interruption around the loop for each spectral band, also provide a substantial loss in the region of the separation wavelength, which is sufficient to avoid ASE loops at wavelengths around the separation wavelength. As a result, by selecting optical seam filters possessing such characteristics, the number of seam filters in the optical network is reduced, and potential ASE loops, e.g. caused by noise amplification, in the region of the separation wavelength are also avoided. The amended features are shown in Figure 6 (the region of the separation wavelength λ s) and in the specification on pages 13 and 14, so no new matter has been added.

Neither Srivastava, nor Israel, nor combination thereof provides such features and advantages. Accordingly, the Applicants believe that the Examiner's rejections under 102(b, e) and 103(a) have been overcome.

Claims 3, 4, 11, and 12 have been amended to provide correct claim dependency as suggested by the Examiner, and to correspond to the language of the amended claims 1 and 9.

The Examiner is requested to respectfully reconsider this application with regard to the amendments to the claims presented above and the above arguments with a view to considering the claims favorably for allowance.

The Commissioner is hereby authorized to deduct any prescribed fees for these amendments, if required, from our Company's **Deposit Account No. 501832**.

Yours truly,
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CLAIMS:

1.(Currently Amended) A method of avoiding an amplified -spontaneous emission (ASE) loop in an optical network comprising a plurality of nodes coupled via optical paths, the nodes and optical paths forming a loop in the network, comprising the steps of:

dividing an optical spectrum of the optical network into at least two substantially non-overlapping spectral bands, which are respectively below and above a separation wavelength and have some non-substantial overlapping in the region of the separation wavelength;~~into a plurality of separate spectral bands~~; and

providing a plurality of optical seam filters, each optically interrupting optical signals in a respective spectral band, distributed among a plurality of nodes around the loop whereby optical signals in at least one spectral band are optically interrupted in one node ~~a different node from~~and optical signals in at least one other spectral band are optically interrupted in a different node, the optical seam filters providing at least one optical interruption around the loop for each spectral band;

wherein said optical seam filters provide a substantial loss in the region of the separation wavelength, which is sufficient to avoid ASE loops at wavelengths around the separation wavelength.

2. (Original) A method as claimed in claim 1 and including the step of, for at least one node including an optical seam filter for a spectral band, add/drop multiplexing optical signals of the spectral band at the node.

3. (Currently amended) A method as claimed in claim 1 wherein -the optical spectrum is divided into ~~into at least two non-overlapping~~ said spectral bands, each band including a plurality of optical wavelengths.

4.(Currently amended) A method as claimed in claim 1 wherein the optical spectrum is divided into ~~at least two~~said spectral bands, each band having interleaved optical wavelengths.

~~5.~~(Canceled) ~~A method of avoiding amplified spontaneous emission (ASE) loops in an optical network comprising a plurality of nodes coupled via optical paths, the nodes and optical paths forming a plurality of loops in the network, comprising avoiding an ASE loop in each of a plurality of said loops by the method of claim 1.~~

~~6.~~ (Canceled) ~~A method as claimed in claim 5 and including the step of, for at least one node including an optical seam filter for a spectral band, add/drop multiplexing optical signals of the spectral band at the node.~~

~~7.~~(Canceled) ~~A method as claimed in claim 5 wherein the optical spectrum is divided into at least two non-overlapping spectral bands each including a plurality of optical wavelengths.~~

~~8.~~(Canceled) ~~A method as claimed in claim 5 wherein the optical spectrum is divided into at least two spectral bands having interleaved optical wavelengths.~~

9.(Currently amended) An optical network comprising a plurality ~~of~~ nodes coupled via optical paths, the nodes and paths forming a loop in the network, wherein an optical spectrum for communications among the nodes via the optical paths is divided into at least two non-overlapping spectral bands, which are respectively below and above a separation wavelength and have some non-substantial overlapping in the region of the separation wavelength,~~comprises a plurality of separate spectral bands,~~ and wherein a plurality of nodes in the loop each comprise at least one optical seam filter for optically interrupting the loop for optical signals in a respective one of the spectral bands, all of the spectral bands of the optical spectrum thereby being optically interrupted by respective optical seam filters distributed among at least two nodes in the loop, wherein said optical seam filters provide a substantial loss in the region of the separation wavelength, which is sufficient to avoid ASE loops at wavelengths around the separation wavelength.

10. (Original) An optical network as claimed in claim 9 wherein at least one of the plurality of nodes in the loop comprising an optical seam

filter further comprises an optical add/drop multiplexer for add/drop multiplexing optical signals of the respective spectral band at the node.

11. (Currently amended) An optical network as claimed in claim ~~8~~9 wherein the optical spectrum ~~comprises at least two non-overlapping~~is divided into said spectral bands, each band including a plurality of optical wavelengths.

12.(Currently amended) An optical network as claimed in claim ~~8~~9 wherein the optical spectrum is divided into said ~~comprises at least two~~ spectral bands, each band having interleaved optical wavelengths.

~~13.~~(Canceled) ~~An optical network comprising a plurality of nodes coupled via optical paths, the nodes and paths forming a plurality of loops in the network, wherein an optical spectrum for communications among the nodes via the optical paths comprises a plurality of separate spectral bands, and wherein a plurality of nodes in each of a plurality of the loops each comprise at least one optical seam filter for optically interrupting the respective loop for optical signals in a respective one of the spectral bands, all of the spectral bands of the optical spectrum thereby being optically interrupted by respective optical seam filters distributed among at least two nodes in the respective one of the plurality of loops.~~

~~14.~~(Canceled) ~~An optical network as claimed in claim 13 wherein at least one of the plurality of nodes in the loop comprising an optical seam filter further comprises an optical add/drop multiplexer for add/drop multiplexing optical signals of the respective spectral band at the node.~~

~~15.~~(Canceled) ~~An optical network as claimed in claim 13 wherein the optical spectrum comprises at least two non-overlapping spectral bands each including a plurality of optical wavelengths.~~

~~16.~~(Canceled) ~~An optical network as claimed in claim 13 wherein the optical spectrum comprises at least two spectral bands having interleaved optical wavelengths.~~

~~17.~~(Canceled) ~~A method of avoiding amplified spontaneous emission (ASE) loops in an optical network comprising nodes coupled via optical fibers, comprising the steps of, in each of one or more loops each comprising a plurality of the nodes:~~

~~providing an optical seam filter for a first spectral band of an optical spectrum of the optical network in a first one of the nodes of the loop thereby to optically interrupt the loop for optical wavelengths within said first spectral band; and~~

~~providing an optical seam filter for at least one other spectral band of the optical spectrum in at least one other of the nodes of the loop, thereby to optically interrupt the loop for optical wavelengths in said at least one other spectral band, whereby the loop is optically interrupted for all spectral bands of the optical spectrum.~~

~~18.~~(Canceled) ~~A method as claimed in claim 17 and including the step of, for at least one node including an optical seam filter for a spectral band, add/drop multiplexing optical signals of the spectral band at the node.~~

~~19.~~(Canceled) ~~A method as claimed in claim 18 wherein the optical spectrum is divided into at least two non-overlapping spectral bands each including a plurality of optical wavelengths.~~

~~20.~~(Canceled) ~~A method as claimed in claim 18 wherein the optical spectrum is divided into at least two spectral bands having interleaved optical wavelengths.~~

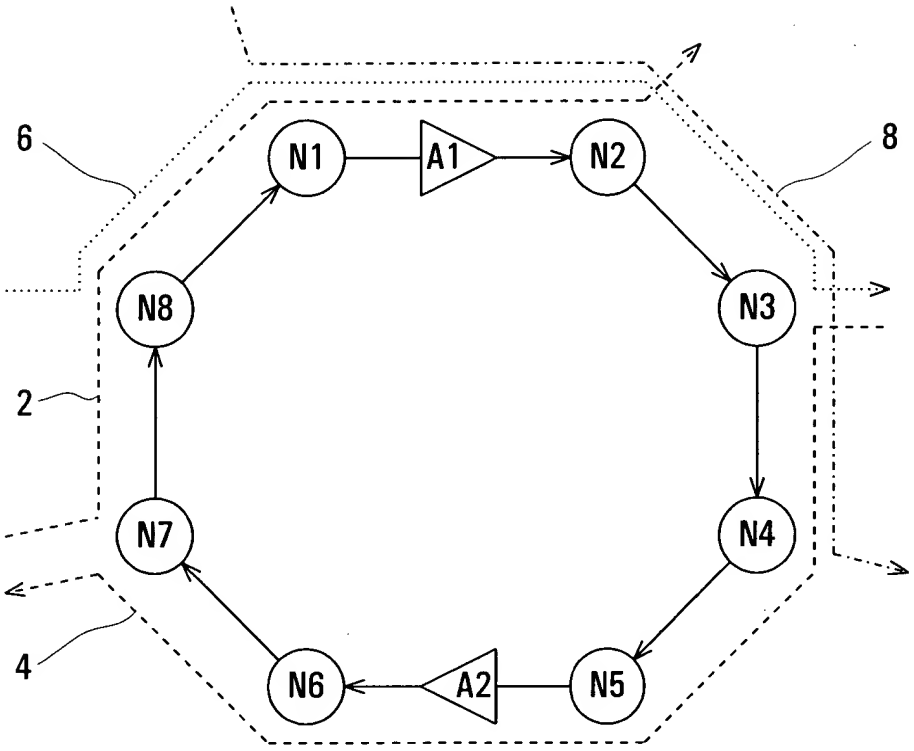

FIG. 1
PRIOR ART

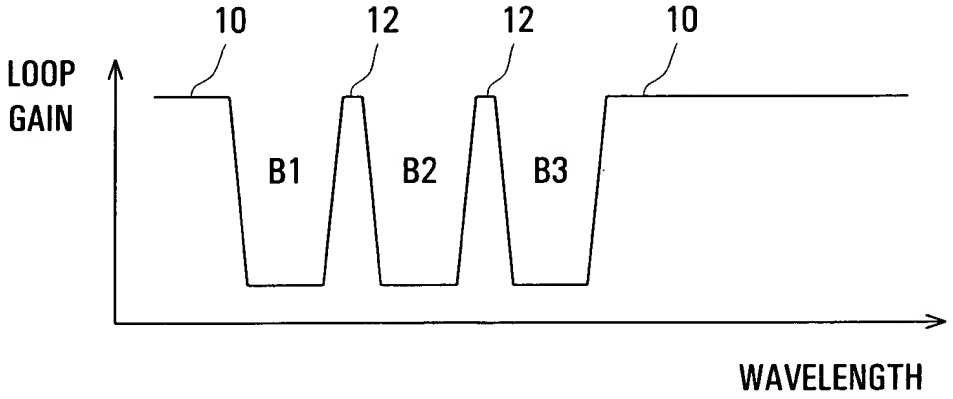

FIG. 2
PRIOR ART

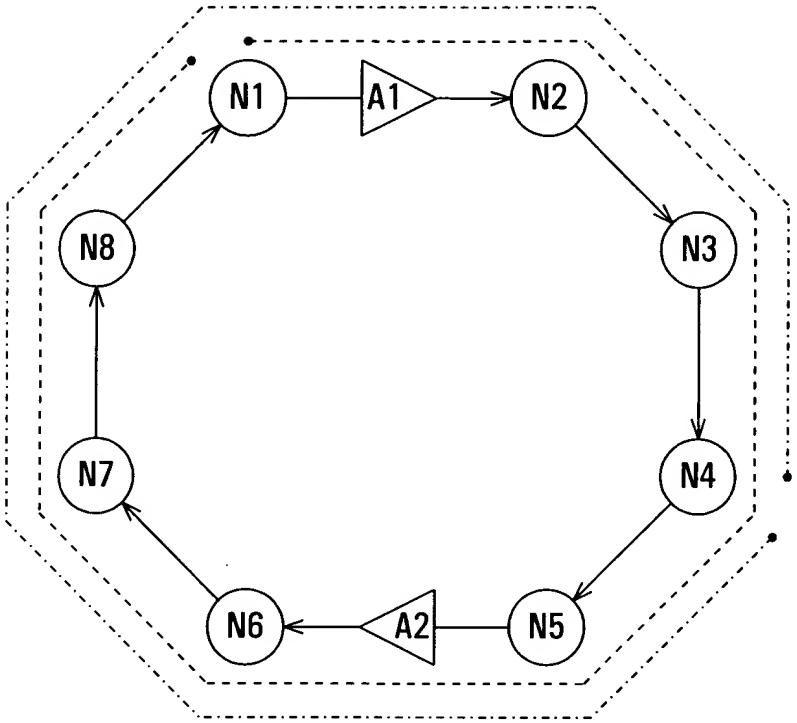

FIG. 3

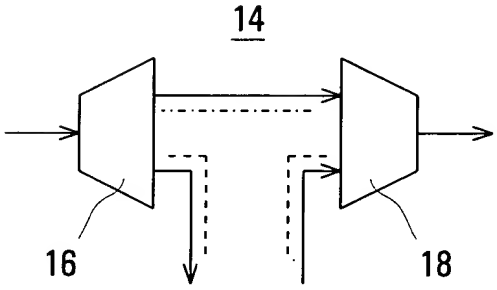

FIG. 4

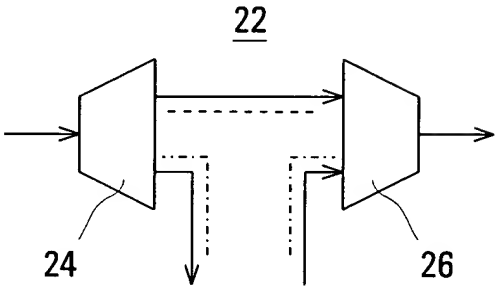

FIG. 5

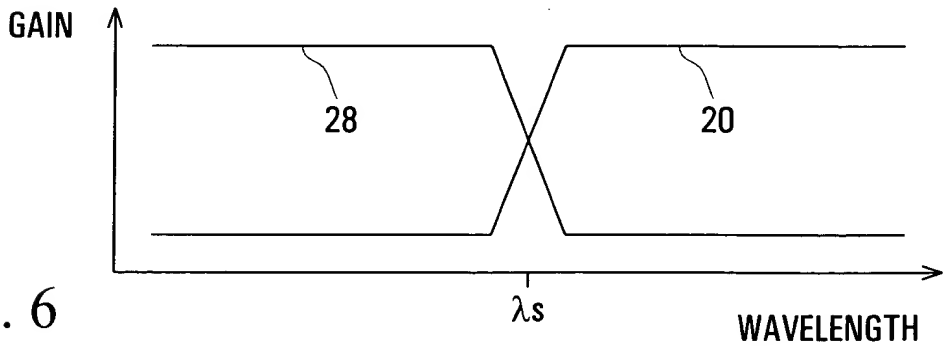

FIG. 6

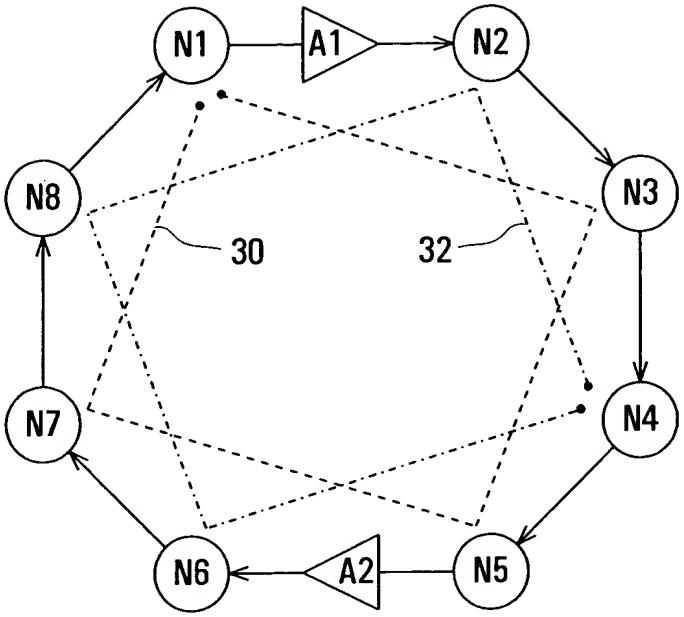

FIG. 7

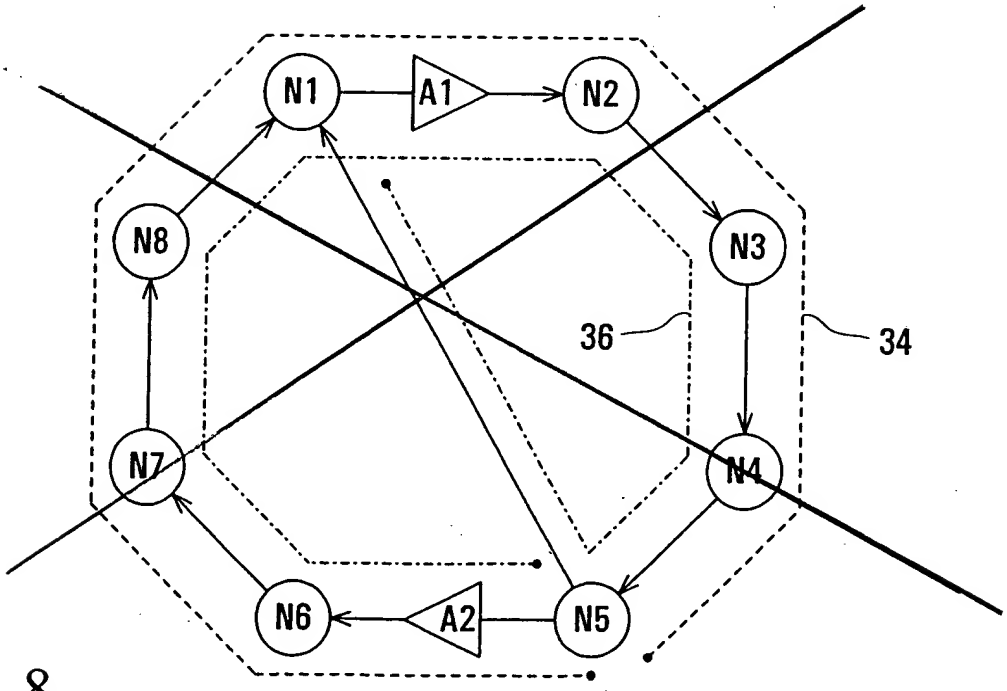

FIG. 8